REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Office Action mailed on September 20, 2007, and the references cited therewith.

Claims 1, 3, 5, 11, 18, and 21-25 are amended, and no claims are canceled or added; as a result, claims 1-29 are now pending in this application.

Election/Restrictions

Applicant notes the withdrawal of the previous restriction requirement and graciously thanks Examiner Dang for reconsidering.

Drawings

The drawings were objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation of "allocating the identified monochrome type pixel data to the red data channel" in claim 5 must be shown or the feature(s) canceled from the claim(s).

Applicant has amended dependent claim 5 to recite:

> The method of claim 4, wherein allocating a color channel includes allocating the red data channel to transfer the identified monochrome type pixel data.

Applicant respectfully submits that the features of dependent claim 5, as amended, are supported by the existing drawings. Therefore Applicant requests reconsideration and withdrawal of the objection to the drawings.

Claim Objections

The specification was objected to under 37 C.F.R. 1.75(d)(1) and MPEP § 608.01(o) as failing to provide proper antecedent basis for the recitation "allocating the identified monochrome type pixel data to the red data channel" in claim 5.

Applicant has amended dependent claim 5 to recite:

> The method of claim 4, wherein allocating a color channel includes allocating the red data channel to transfer the identified monochrome type pixel data.

Applicant respectfully submits that proper antecedent basis for dependent claim 5, as amended, is provided in the specification, as originally filed. Therefore Applicant requests reconsideration and withdrawal of the objection to the specification.

§ 101 Rejection of the Claims

Claims 11-17 and 22-24 were rejected under 35 USC § 101 as being directed to non-statutory subject matter. Applicant respectfully traverses the rejection as follows.

Regarding claims 11-17, Applicant respectfully submits that one of ordinary skill in the art, having read Applicant's specification, would understand "optically read media" not to include "paper." Applicant respectfully submits, that taken in the context of the specification as a whole, and the sentence in which it appears, "optically read media" would not be understood by one of ordinary skill in the art to include paper. For example, page 7, lines 3-6 of Applicant's specification states:

> Memory 104 can include ROM and/or RAM, including dynamic RAM, magnetic media, and optically read media, non-volatile and writeable memory such as battery-backed memory or flash memory, or a combination of various memory types, among others.

One of ordinary skill in the art would understand "optically read media" to include media such as compact discs (CDs), digital versatile discs (DVDs), and the like. Such media can be used as memory by a computer. "Optically read media" should not be read so broadly, in this context, to include paper or other media that cannot be used as memory by a computer. Accordingly, Applicant requests reconsideration and withdrawal of the § 101 rejection of claims 11-17.

Regarding claims 22-24, Applicant has amended the claims to include the recitation, "a computer readable medium having a set of computer executable instructions." Applicant respectfully submits that dependent claims 22-24, as amended, are drawn to statutory subject matter. As such, Applicant requests reconsideration and withdrawal of the § 101 rejection of claims 22-24.

§ 102 Rejection of the Claims

Claims 1-4, 11, 14, 18-19, 21-23 and 24-29 were rejected under 35 USC § 102(b) as being anticipated by Sasaki et al (U.S. Patent No. 4,682,216). Applicant respectfully traverses the rejection as follows.

From the Applicant's review the Sasaki reference appears to describe an image processor for converting RGB signals into YMC signals, extracting a black component from the densities of YMC, and three and/or four color masking. (Column 3, lines 44-53). The Sasaki reference does not describe allocating more than one color channel to transfer monochrome type pixel data. And, even if, for example, BK in the Sasaki reference could be read as monochrome type pixel data consistently with Applicant's specification, Sasaki does not describe monochrome type pixel data that can be represented by a single monochrome base color and the shades of the base color. Furthermore, even though three color channels are input to Sasaki's Black Generating Circuit 22, only one channel BK is output. Thus, if BK is identified as monochrome type pixel data, only one channel is allocated to transfer it.

In contrast, Applicant's independent claims 1 and 11, as amended, recite in part:

> identifying monochrome type pixel data within a data stream that can be represented by a single monochrome base color and shades of the base color; and
>
> allocating more than one color channel to transfer the identified monochrome type pixel data.

Furthermore, Sasaki does not describe a first and second channel in the color pipeline to transfer both monochrome type pixel data, and a first and second color type pixel data. In contrast, Applicant's independent claim 18, as amended, recites in part:

> a first channel in the color pipeline to transfer both monochrome type pixel data, which can be represented by a single monochrome base color and the shades of the base color, and a first color type pixel data;

> a second channel in the color pipeline to transfer both the monochrome type pixel data and a second color type pixel data.

Further, Sasaki does not describe allocating more than one color type pixel processing channel to transfer identified monochrome type pixel data. In contrast, Applicant's independent claim 21, as amended, recites in part:

> means for identifying monochrome type pixel data that can be represented by a single monochrome base color and the shades of the base color; and
>
> means for allocating more than one color type pixel processing channel to transfer the identified monochrome type pixel data.

Additionally, Sasaki does not describe a processing unit that transferes at least one monochrome type and color type pixel data in more than one channel. In contrast, Applicant's independent claim 25, as amended, recites in part:

> a processing unit coupled to the data source, the processing unit having a pipeline to perform pixel processing operations on at least one monochrome type and color type pixel data, wherein the processing unit transfers the at least one monochrome type and color type pixel data in more than one channel defined within the pipeline and processes the monochrome type pixel data with a number of processing modules connected to a defined channel.

As such, Applicant respectfully submits that each and every element and limitation of independent claims 1, 11, 18, 21, and 25 as amended, are not present in the Sasaki reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 102 rejection of independent claims 1, 11, 18, 21, and 25, as amended, as well as dependent claims 2-4, 19, 22-23, 24, and 26-29 that respectively depend therefrom.

Claims 1-29 were rejected under 35 USC § 102(b) as being anticipated by Vondran, Jr. et al (U.S. Patent No. 5,915,079). Applicant respectfully traverses the rejection as follows.

From the Applicant's review the Vondran reference appears to describe a print data processing pipeline for use in a color electrophotographic printer

optimizes print quality and minimizes memory usage by separately processing lossy and lossless print data. (Abstract). The Vondran reference does not describe allocating more than one color channel to transfer the identified monochrome type pixel data.

In contrast, Applicant's independent Claims 1 and 11, as amended, recite "allocating more than one color channel to transfer the identified monochrome type pixel data."

Further, Vondran does not describe sharing a color channel to transfer monochrome type pixel data and color type pixel data.

In contrast, Applicant's independent claim 6 recites, "sharing a color channel to transfer monochrome type pixel data and color type pixel data".

Additionally, Vondran does not describe a first channel in the color pipeline to transfer both monochrome type pixel data, which can be represented by a single monochrome base color and the shades of the base color, and a first color type pixel data and a second channel in the color pipeline to transfer both the monochrome type pixel data and a second color type pixel data".

In contrast, Applicant's independent claim 18, as amended, recites:

> a first channel in the color pipeline to transfer both monochrome type pixel data, which can be represented by a single monochrome base color and the shades of the base color, and a first color type pixel data;
> a second channel in the color pipeline to transfer both the monochrome type pixel data and a second color type pixel data

Also, Vondran does not describe means for allocating more than one color type pixel processing channel to transfer the indentified monochrome type pixel data.

In contrast, Applicant's independent claim 21, as amended, recites, "means for allocating more than one color type pixel processing channel to transfer the indentified monochrome type pixel data."

Furthermore, Vondran does not describe a processing unit coupled to the data source, the processing unit having a pipeline to perform pixel processing operations on at least one monochrome type and color type pixel data, wherein the

processing unit transfers the at least one monochrome type and color type pixel data in more than one channel defined within the pipeline and processes the monochrome type pixel data with a number of processing modules connected to a defined channel.

In contrast, Applicant's independent claim 25, as amended, recites:

> a processing unit coupled to the data source, the processing unit having a pipeline to perform pixel processing operations on at least one monochrome type and color type pixel data, wherein the processing unit transfers the at least one monochrome type and color type pixel data in more than one channel defined within the pipeline and processes the monochrome type pixel data with a number of processing modules connected to a defined channel.

As such, Applicant respectfully submits that each and every element and limitation of independent Claims 1, 6, 11, 18, 21, and 25 are not present in the Vondran reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 102 rejection of independent claims 1, 6, 11, 18, 21, and 25, as well as those claims that depend therefrom.

§103 Rejection of the Claims

Claims 4-10, 12-13, 15-17, 20 and 24 were rejected under 35 USC § 103(a) as being unpatentable over Sasaki et al (U.S. Patent No. 4,682,216). Applicant respectfully traverses the rejection as follows.

Claims 4-5 depend from independent claim 1. Claims 12-13 and 15-17 depend from independent claim 11. Claim 20 depends from independent claim 18. Claim 24 depends from independent claim 21. For the reasons provided above with respect to the 102 rejections, Applicant respectfully submits that independent claims 1, 11, 18, and 21 are allowable in view of the Sasaki reference.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 4-5, 12-13, 15-17, 20, and 24, which depend from allowable claims 1, 11, 18, and 21 respectively.

Furthermore, the Office Action mailed September 20, 2007 states, "Sasaki fails to explicitly teach the claimed features as recited in claims 4-10, 12-13, 15-17,

20, and 24." Applicant agrees. However, the Office Action goes on to allege, "such claimed features are well known and widely used in the art (Office [*sic*] Notice)." Applicant kindly requests an affidavit or reference to be cited by in support of the official notice per MPEP § 2144.03.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of independent claim 6, as well as those claims that depend therefrom.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Robert D. Wasson at (360) 212-2338 to facilitate prosecution of this matter.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 C.F.R. §1.8:
The undersigned hereby certifies that this correspondence is being transmitted to the United States Patent Office facsimile number (571) 273-8300 on December 20, 2007

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